

CURRICULUM VITAE

Name: Estuardo J. Miranda, M.S.

Occupation: Forensic Scientist 3

Employer: Washington State Patrol Toxicology Laboratory

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EDUCATION

Arizona State University, Tempe AZ

Master of Science in Zoology **1996**

Arizona State University, Tempe AZ

Major: *Bachelor of Science in Chemistry with emphasis in Biochemistry* **1993**

Minor: *Zoology* **1993**

EMPLOYMENT HISTORY

Forensic Scientist 3

6/2001-Present

Washington State Patrol Toxicology laboratory

- Analyze biological specimens for common drugs of abuse and alcohol in DUI and death investigations.
- Prepare simulator external standard solution for use with the BAC Datamaster.
- Interpret results from analytical instrumentation (*i.e.* GC/MS).
- Testify in courts of law as an expert witness in alcohol and drug related issues, including pharmacology and effects.
- Perform regular maintenance of instrumentation.
- Prepare scientific examination reports

Criminalist

1998-5/2001

Arizona Department of Public Safety Crime laboratory (toxicology unit)

- Analyzed biological specimens for alcohol and common drugs of abuse in DUI investigations. Interpreted results from analytical instrumentation and prepared scientific examination reports.
- Testified in courts of law as an expert witness in alcohol and drugs of abuse related issues, including pharmacology, effects and retrograde calculations.
- Trained new criminalists and officers including drug recognition experts (DRE)

Research Technologist

Carl T. Hayden VA Medical Center

1997-1998

- Investigated the role of lipoproteins in cardiovascular disease.

Graduate Research/Teaching Assistant

Arizona State University

1993-1996

- Designed original research project in membrane physiology and conducted all data collection using various biochemical techniques.
- Taught laboratories in 1) Human anatomy and Physiology and 2) Basic Physiology, employing preserved and live animals including live animal surgeries.

LICENSES AND CERTIFICATIONS

- Washington State Blood Alcohol Analyst, issued 7-31-01.
- Arizona Department of Health Services Lab Analyst Permit #232 (expired 2000)

PARTICIPATION IN PROFICIENCY PROGRAMS

- Blood Alcohol: California Association of Pathologists
U.S. Department of Transportation
- Drug analysis: California Association of Pathologists

PROFESSIONAL MEMBERSHIPS

California Association of Toxicologists, Associate Member

PUBLICATIONS

- The effect of acclimation temperature on the fusion kinetics of lipid vesicles derived from endoplasmic reticulum membranes of rainbow trout (*Onchorhynchus mykiss*) liver. Comparative Biochemistry and Physiology Part A 131 (2002) 275-286.
- Temperature induced changes in the transbilayer distribution of phosphatidylethanolamine in mitoplast of rainbow trout (*Onchorhynchus mykiss*) liver. Journal of experimental Zoology, 1996, 274:23-32.
- Reported Death by Ingestion of 2,4-Dinitrophenol. Journal of Analytical Toxicology, 2003, 27:192-193 (Abstract).

CONTINUING EDUCATION AND TRAINING:

- March 27-29, 2003 – Annual meeting of Canadian Society of Forensic Science
Drugs and Driving workshop – *The A-Z of Marijuana*
Drugs and Driving workshop – *Chemical Drugs and the Rave Culture*
- October 13-17, 2002 – Annual meeting of Society of Forensic Toxicologists in Dearborn, Michigan.
Workshop 2 – *Pharmacogenomics*
Workshop 3 – *Forensic Toxicological Aspects of Human Growth and Development*
Workshop 6 – *Pharmacology and Toxicology of Brain Drugs*
Workshop 8 – *Medicolegal Death Investigation*
- November 16, 2000 – Workshop: *The science of Solid Phase Extraction*. Presented by Michael Telepchak, President and CEO of United Chemical Technologies, Inc. Phoenix, AZ.
- October 2-6, 2000 – Annual meeting of Society of Forensic Toxicologists in Milwaukee, WI.
Workshop 3 – *Benzodiazepines: Pharmacology and Analytical Challenges*.
Workshop 5 – *Marijuana Forensic Symposium*
- December 3-6, 1999 – Short Course: *Mass spectrometry and spectral interpretation*. Instructed by Dr. Henry Nowicki from Professional Analytical and Counseling Services Inc. (PACS). San Francisco, CA.
- October 1999 – Seminar: *Comprehensive Gas Chromatography Training*. Presented by Paul Silvis and Christine Vargo from RESTEK. Phoenix, AZ.
- August 1999 - California Association of Toxicologists, Quarterly Meeting. Las Vegas, NV.
- June 1999 - *Effective Testifying skills seminar*. Presented by Paul and Sandra Sovinski of stars Inc. Phoenix, AZ.

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- January 1999 - National Highway Traffic Safety Administration: *Drug Evaluation and Classification Course “Drug Recognition Expert School”*. Phoenix, AZ.
- December 6-11, 1998 - Test for BAC in Highway Safety Programs - *Supervision and expert Testimony*. Indiana University, Center for Studies of law in Action. Dr. Robert F. Borkenstein, Director. Bloomington, IN.
- 11/98-9/99 - Urine Drug Screen - Enzyme Multiplied Immunoassay Technique (EMIT) and Gas chromatography/mass spectrometry (GC/MS) Training program by Arizona Department of Public Safety, Crime Laboratory. Phoenix, AZ.
- 2/4-98 - Forensic Blood Alcohol Training Program by Arizona Department of Public Safety Crime Laboratory. Phoenix, AZ.